



DOCKET NO.: PUAM-0257

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Daniel Kahne, et al.

Application No.: 10/631,883

Filing Date: July 31, 2003

For: GLYCOPEPTIDE ANTIBIOTICS, COMBINATORIAL LIBRARIES OF  
ANTIBIOTICS AND METHODS OF PRODUCING SAME

Confirmation No.: Not Yet Assigned

Group Art Unit: Not Yet Assigned

Examiner: Not Yet Assigned

DATE OF DEPOSIT: *October 21, 2003*

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*Elizabeth A. McLoud*

TYPED NAME: Elizabeth A. McLoud

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 CFR § 1.56 and in accordance with 37 CFR §§ 1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 CFR § 1.56(b).

- ☒ In accordance with § 1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified application, within three months of the date of entry into the national stage of

the above identified application as set forth in § 1.491, before the mailing date of a first Office Action on the merits of the above-identified application, or before the mailing date of a first Office Action after the filing of request for continued examination under § 1.114, no additional fee is required.

- ☐ In accordance with § 1.129(a), this Information Disclosure Statement is being filed in connection with ☐ the first or ☐ second After Final Submission, therefore:

☐ Certification in Accordance with § 1.97(e) is attached; or

☐ The fee of \$180.00 as set forth in § 1.17(p) is attached.

- ☐ In accordance with § 1.97(c), this Information Disclosure Statement is being filed after the period set forth in § 1.97(b) above but before the mailing date of either a Final Action under § 1.113 or a Notice of Allowance under § 1.311, or before an action that otherwise closes prosecution in the application, therefore:

☐ Certification in Accordance with § 1.97(e) is attached;

or

☐ The fee of \$180.00 as set forth in § 1.17(p) is attached.

- ☐ In accordance with § 1.97(d), this Information Disclosure Statement is being filed after the mailing date of either a Final Action under § 1.113 or a Notice of Allowance under § 1.311 but before, or simultaneously with, the payment of the Issue Fee, therefore included are: Certification in Accordance with § 1.97(e); and the submission fee of \$180.00 as set forth in § 1.17(p).

- ☐ Copies of each of the references listed on the attached Form PTO-1449 are enclosed herewith.

- ☐ Copies of references listed on the attached Form PTO-1449 are enclosed herewith
- ☐ Copies of references listed on the attached Form PTO 1449 are not required to be submitted pursuant to the June 30, 2003 recent revisions to 37 CFR § 1.98(a)(2)(i).

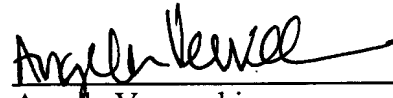
## EXCEPT THAT:

- ☒ In view of the voluminous nature of reference 27, and the likelihood that this reference is available to the Examiner, copies are not enclosed herewith.
- ☐ In accordance with § 1.98(d), copies of the following references listed on the attached Form PTO-1449 are not enclosed herewith because they were previously cited by or submitted to the U.S. Patent and Trademark Office in patent application(s) for which a claim for priority under 35 U.S.C. § 120 have been made in the instant application:
- ☒ Copies of references **1-60** listed on the attached Form PTO-1449 were previously cited by or submitted to the Patent and Trademark Office in prior Application No. **09/353,368**, filed **July 14, 1999**.

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- ☐ The relevance of those listed references which are not in the English language is as follows:
- ☒ There are no listed references which are not in the English language.

Date: 10/21/03

  
Angela Verrecchio  
Registration No. 54,510

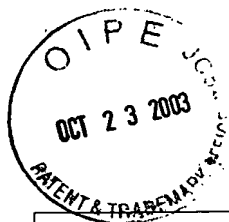
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<b>Form PTO-1449 Modified</b>  List of Patent and Publications Cited by Applicant (Use several sheets if necessary)  U.S. Department of Commerce Patent and Trademark Office		Docket No. PUAM-0257	Application No. 10/631,883
		Applicant Daniel Kahne, et al.	
		Filing Date July 31, 2003	Group Not Yet Assigned
		Confirmation No. Not Yet Assigned	
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>			
	1	Allen, M., et al., "The role of hydrophobic side chains as determinants of antibacterial activity of semisynthetic glycopeptide antibiotics," <i>J. Antibiot.</i> , <b>1997</b> , 50, 677-684	
	2	Beauregard, D., et al., "Dimerization and membrane anchors in extracellular targeting of vancomycin group antibiotics," <i>Amtimicr. Agents &amp; Chemo.</i> , <b>1995</b> , 39, 781-785	
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	6	Cooper, R., et al., "Semisynthetic glycopeptide antibiotics," in Ann. Rept. In Med. Chem.-31, <i>Academic Press, Inc.</i> , <b>1996</b> , Chap. 14, 131-140	
	7	Damour, O., et al., "Cytotoxicity evaluation of antiseptics and antibiotics on cultured human fibroblasts and keratinocytes," <i>Burns</i> , <b>1992</b> , 18, 479-485	
	8	Dick, W.E., <i>Carbohyd. Res.</i> , <b>1972</b> , 21, 255-268	
	9	Felmingham, D., "Towards the ideal glycopeptide," <i>J. Antimicrob, Chemother.</i> , <b>1993</b> , 32, 663-666	
	10	Gallop, M.A., et al., "Applications of combinatorial technologies to drug discovery, 1. Background and peptide combinatorial libraries," <i>J. Med. Chem.</i> , <b>1994</b> , 37, 1233-1251	
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	11	Gerhard, U., et al., "The role of the sugar and chlorine substituents in the dimerization of vancomycin antibiotics," <i>JACS</i> , <b>1993</b> , <i>115</i> , 232-237	
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	13	Kannan R., et al., "Function of the amino sugar and N-terminal amino acid of the antibiotic vancomycin in its complexation with cell wall peptides," <i>JACS</i> , <b>1988</b> , <i>110</i> , 2946-2953	
	14	Kusumoto, S., et al., <i>Bull. Chem. Soc. Jpn.</i> , <b>1986</b> , <i>59</i> , 1289-1298	
	15	Link, P.A.J., et al., <i>J. Heterocyclic Chem.</i> , <b>1985</b> , <i>22</i> , 873-878	
	16	Loll, P., et al., "Simultaneous recognition of a carboxylate-containing ligand and an intramolecular surrogate ligand in the crystal structure of an asymmetric vancomycin dimer," <i>JACS</i> , <b>1997</b> , <i>119</i> , 1516-1522	
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	20	Mercier, R-C., et al., "Pharmacodynamic evaluation of a new glycopeptide, LY333328, and <i>in vitro</i> activity against <i>Staphylococcus aureus</i> and <i>Enterococcus faecium</i> ," <i>Antimicrob. Agents Chemother.</i> , <b>1997</b> , <i>41</i> , 1307-1312	
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**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

	21	Mikami, Y., et al., "Comparison of <i>in vitro</i> antifungal activity of itraconazole and hydroxyl-itraconazole by colorimetric MTT assay," <i>MYCOSES</i> , <b>1994</b> , 37, 27-33
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	23	Mosmann, T., "Rapid colorimetric assay for cellular growth and survival; application to proliferation and cytotoxicity assays," <i>J. Immunol. Methods.</i> , <b>1983</b> , 65, 55-63
	24	Nagarajan, R., "Antibacterial activities and modes of action of vancomycin and related glycopeptides," <i>Antimicrob. Agents Chemother.</i> , <b>1991</b> , 35, 605-609
	25	Nagarajan, R., et al., "Selective cleavage of vancosamine, glucose, and N-methyleucine from vancomycin and related antibiotics," <i>J. Chem. Soc. Chem. Comm.</i> , <b>1988</b> , 1306-1307
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*	27	National Committee for clinical laboratory (NCCL) Standard, "Methods for dilution antimicrobial susceptibility tests for bacteria that grow aerobically-third edition; approved standard. NCCLS document M7-A3, <i>National Committee for Clinical Laboratory Standard, Villanova, PA</i> , <b>1993</b> ,
	28	Neu, H., <i>Science</i> , <b>1992</b> , 257, 1064
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	30	Pavlov A., et al., "Synthesis and biological activity of derivatives of glycopeptide antibiotics eremomycin and vancomycin nitrosated, acylated or carbamoylated at the N-terminal," <i>J. Antibiot.</i> , <b>1993</b> , 46, 1731-1739

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\* A copy of this reference will not be forwarded to the U.S. Patent and Trademark Office since it is believed to be too voluminous and easily obtainable by the Examiner.



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	31	Pierce, C., et al., <i>J. Chem. Soc. Perkins Trans.</i> , <b>1995</b> , 2, 153-157
	32	Prowse, W., et al., <i>Biochemistry</i> , <b>1995</b> , 34, 9632-9644
	33	Rodriquez, M. J., "Novel Glycopeptide Antibiotics: <i>N</i> -Alkylated Derivatives Active Against Vancomycin-Resistant Enterococci," <i>J. Antibiotics</i> , <b>June 1998</b> , 51(6), 560-569
	34	Solenberg, P.J., et al., "Production of hybrid glycopeptide antibiotics <i>in vitro</i> and in <i>Streptomyces toyocaensis</i> ," <i>Chem. Biol.</i> , <b>1997</b> , 4, 195-202
	35	Terrett, N.K., et al., "Combinatorial synthesis – the design of compound libraries and their application to drug discovery," <i>Tetrahedron Letters</i> , <b>1995</b> , 51, 8135-8173
	36	Thompson, L.A., et al., "Synthesis and applications of small molecule libraries," <i>Chem. Rev.</i> , <b>1996</b> , 96, 555-600
	37	Walsh, C., <i>Science</i> , <b>1993</b> , 261, 308
	38	Webb, et al., <i>Tetrahedron</i> , <b>1998</b> , 54, 401-410
	39	Westwall, et al., <i>J. Antibiotics</i> , <b>1995</b> , 48, 1292
	40	William, D., et al., "Toward an estimation of binding constraints in aqueous solution: studies of associations of vancomycin group antibiotics," <i>PNAS USA</i> , <b>1993</b> , 90, 1172-1178
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	41	Williams, D., et al., "Molecular basis of the activity of antibiotics of the vancomycin group," <i>Biochem. Pharm.</i> , <b>1988</b> , 37, 133-141	
	42	Williams, D.H., "An analysis of the origins of a cooperative binding energy of dimerization," <i>Science</i> , <b>1998</b> , 280, 711-714	
	43	Yan, L., et al., <i>JACS</i> , <b>1994</b> , 116, 6953	
	44	Zelenitsky, S., et al., "Time-kill curves for a semisynthetic glycopeptide, LY333328, against vancomycin-susceptible and vancomycin-resistant <i>Enterococcus faecium</i> strains," <i>Antimicrob. Agents Chemother.</i> , <b>1997</b> , 41, 1407-1408	
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**U. S. PATENT DOCUMENTS**

Examiner Initial		Document No.	Date	Name	Class	Subclass
	45	5,602,229	02/11/97	Malabarba, et al.	530	317
	46	5,668,272	09/16/97	Prasad et al.	536	55.3
	47	5,684,127	11/04/97	Malabarba et al.	530	317
	48	5,750,509	05/12/98	Malabarba et al.	514	11
	49	5,795,958	08/18/98	Rao et al.	530	331
	50	5,837,862	11/17/98	Wong et al.	536	53
	51	5,843,889	12/01/98	Cooper et al.	514	8
	52	6,498,238	12/24/02	Kim et al.	536	16.8
	53	20020045574 A1	04/18/02	Kim et al.	514	8

**FOREIGN PATENT DOCUMENTS**

Examiner Initial		Document No.	Date	Country	Translation	
					YES	NO
	54	WO 00/04044 A1	01/27/00	PCT		
	55	WO 00/42067 A1	07/20/00	PCT		
	56	WO 00/69893 A1	11/23/00	PCT		
	57	WO 01/81373 A2	11/01/01	PCT		
	58	0 802 199 A2	10/22/97	EP		
	59	0 802 199 A3	11/05/97	EP		
	60	0 881 229 A2	12/02/98	EP		

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